Work Orde October-15-12	er ID 91701 3:22:34 PM			*917	701*						Page 1
Item ID: Revision ID: Item Name:	D3188-2M SPACEPOD BODY RI	Н		Accept	*N900	040	100)* s	etup Sta Sto	1 14.	S1* S2*
Start Date: Required Date: Reference:		Qty: 1.00 Qty: 1.00	*1* *1*		Cust Item I Customer:	D:					
Approvals:	Process Plan: QC:		Date:	Tooling: SPC (Y/N):		nte:		R	un Sta	I <i>N</i>	R1* R2*
Sequence ID/ Work Center I	Operat D Descrip			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nb	r									
D3188	Rev F										
*100 *100* Purchasing	PURCHA	Memo	1612	0.00					N	12-1	0-14
Purchasing		SHIP: QTY Supplier: De Conformity	D3188-2NBODY (8) D2213 Spacers elastek Certificate and Process s from Previous steps	sheet required							
110	Receive	& Inspect for Da	amage & Mat'l Certs	0.00						11	
110 Packaging		Memo		0.00		•			_/	13/4/2	y(1)
Packaging		Ensure a co	py of certification of cor	formity and process sheet f	from Delastek is					~	

attached.

										DQA:	Date:	.
NCR:	Yes / No				WORK ORDER NON-O	100	NFORM	MANCE / UPE	DATE			· .
										QA Closed:	Date:	
Mark Ord					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Work Orde	er				Rework	ı		Skid-tube	Crosstube		Water Jet	Engineering
Part N	۷n				Scrap	 		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, arei	···				Use-as-is	1	l	noforming	Finishing		e/Packaging	Other
NCR 1	No.				Work Order Update	1	1	Large Fab	Composite	,	Supplier	1
				<u> </u>	·	_		_ ·	· •			
Root				Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator		ļ									4	
Material						-						
Setup	Ц											
Other												
Process												
Supplier	Ц								•			
Training						1						
Unapproved			<u> </u>									
_						AUL	LT CATE	GORY				
Landi	ng Gear			_	General		1			7	 -	٦
	Bending				Bend	<u></u>	Grain		<u> </u>	Ovalized		Pressure/Forced
		Not Conce	ntric to	o/s	BOM/Route		Hardwa			Over/Under	<u> </u>	Temperature/Cure
-	Cracks			<u> </u>	Broken/Damaged	\vdash	1 '	iori Incomplete		Part Incorre	·	Weld
		/Crimped		<u> </u>	Burrs		-	ions Incomplete/L	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs			<u></u>	Contamination		Mainte			Part Moved		
	Heat Tre	Heat Treat			Countersink	1	Mislabe	eled		Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 91701 *91701* Page 2 October-15-12 3:22:34 PM Item ID: D3188-2M Accept *N900040100* Setup Start **Revision ID:** SPACEPOD BODY RH Item Name: Start Oty: 1.00 **Start Date:** 10/15/12 **Cust Item ID: Req'd Qty:** 1.00 Required Date: 11/05/12 **Customer:** Reference: Run Process Plan: Date: Tooling: Approvals: Date: Stop SPC (Y/N): Date: Date: Operation Sequence ID/ Set Up/ Tool # Plan Tool ID Accept Reject Reject Insp. Work Center ID Qty Description **Run Hours** Code Qty Number Stamp 120 QC6- Inspect dimensions to drawing 0.00 *120* OC. Memo Check for void spot and pins. Quality Control 130 *120* 0.00 Packaging Memo Packaging 140 QC21- Final Inspection - Work Order Release 0.00 *110* 0.00 Memo Quality Control

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

											QA Closed:	Date	2;
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part (Rework Scrap Use-as-is Work Order Update] 	ا nerm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update	Initia	al	Actio	n	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Chief I	Eng	Descrip	tion	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш											:	
Operator													
Material													
Setup	Ш												
Other										•			
Process	Ш												
Supplier	Ш												
Training	Ш												
Unapproved											<u> </u>		
		_				······································	AULT C	ATE	GORY				
Landi						General				_	7	r	 1
	-	ending			<u> </u>	Bend	Gra			_	Ovalized	_	Pressure/Forced
	\vdash	entre No	t Concer	ntric to (O/S	BOM/Route	\vdash	dwa		<u> </u>	Over/Under	 -	Temperature/Cure
	$\boldsymbol{\vdash}$	racks				Broken/Damaged			orı Incomplete		Part Incorre	⊢	Weld
	\vdash	rushed/0	Crimped.		\vdash	Burrs	\blacksquare		ions Incomplete/Un	clear	Part Lost/Mi	issing	Wrong Stock Pulled
		Cuffs				Contamination	\vdash		nance		Part Moved		
	Heat Treat				_	Countersink	\vdash	slabe		<u></u>	Positioned V		\neg
	Inspection Strip in Tube			Cut Too Short	\vdash	reac	i	L	Power Loss/	Surge	Other		
	Ripples in Bend		Drill Holes	Off									
	_	orque W			^ւ	Drawing	Out of Calibration						
	Turning Sequence					Finish	Out of Sequence						
l	ı İv	Wave/Twist in Tube			1	Folio	Outside Dimensions						

Page 1

Work Order ID:

91701

Parent Item:

D3188-2M

Parent Item Name:

SPACEPOD BODY RH

Start Date: 10/15/12

Required Date: 11/05/12

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev: A New issue ecn882

06-11-30 EC

IPP rev B rev D dwg

07.03.07 ec 07.04.16 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2213		Manufactured	No			100	Each	146.0000	8	8	·8 B	2080	19
Insert										/ 	ر ه	000	12-10
				Location		Loc Oty	<u>Lo</u>	c Code				μ	10-10
				ST006		146							
				30809	9	146							
D3188-2P		Purchased	No			110	Each	0.0000	1	1			
Spacepod Body					B	91701				R	13-	013	र ०

										DQA:	Date:	•
NCR:	Yes / No				WORK ORDER NON-C	O	VFORM	MANCE / UPI	DATE	•		
										QA Closed:	Date:	
Work Orde	ar.				DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part f	No				Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update		Initial	Act	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data								,				
Equip/Tooling												
Operator						1					•	
Material		-			·							
Setup		İ										
Other							:					
Process												
Supplier												
Training												
Unapproved				_								
					F	AUL	T CATE	GORY				
Landi	ng Gear				General		_			_		
	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre Not Concentric to O/S			BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure	
	Cracks			Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld	
				Burrs		Instruct	ions Incomplete/I	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
					Contamination		Mainte	enance		Part Moved	_	
	Heat Treat				Countersink	\vdash				Positioned Wrong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

GENERAL NOTES: 1) MATERIALS: RESIN: EPOCAST 50-A/9816 OR DERAKANE 470-36/411/510A40 FIBER: 9.7 oz 7781 WEAVE "S" GLASS (9 oz SATIN)
12 oz UNIDIRECTIONAL FIBERGLASS ("12 oz UNIDIRECTIONAL") 18 oz ROVING "E" GLASS (18 oz CLOTH) OWENS CORNING MILLED FIBERS, "E" GLASS 3M K20 GLASS BUBBLES FOAM: A500 CORE CELL OR DIVINYCELL OR AIREX OR KLEGECELL FILL VOIDS IN FOAM WITH PASTE MADE FROM MILLED FIBERS & RESIN MOLD SHEDULE: LAYUP TRIM AND DRILL D3188-1M/-1/-5 DT8003 DT8501 D3188-2M/-2/-6 DT8004 DT8502 D3188-3M/-3/-7 DT8500 DT8501 FINISH: INSIDE/OUTSIDE WITH GREY DUPONT HIGHBUILD PRIMER 1144-S. APPLY ANTI-SKID PAINT TO TOP SURFACE OF PODS PER QSI 005 4.4 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED UNITS: INCHES UNLESS OTHERWISE NOTED BREAK SHARP EDGES: 0.005 TO 0.010 MAX 5) IDENTIFICATION: NONE 7) WEIGHT: D3188-1 = N/A D3188-2 = N/A D3188-3 = N/A D3188-5 = N/A D3188-6 = N/A D3188-7 = N/A REFERENCE DIMENSIONS MATCH AIRCRAFT CONTOUR AND DOOR OPENING LAMINATE PER DART QSI 006. LAMINATION SCHEDULE PER THIS DRAWING



D

F	TO CUI	RRENTS STA	WS AND REFORMATTED DRAWING NDARDS; ADD CHAMFER IN C7-10) & H-H (ZN 87-11)	RF	09.07.13
Ε	ADD H	YSOL/ FIBER	OPTION ON SHEET 11	CB	07.04.02
D	UPDAT	E DIMENSION	NS	LE	07.02.22
С	REMO	/ED D0600-X	XX LABELS	LE	06.12.13
В		ED DWG TO 1M/-2M/-3M/-	MATCH PRODUCT ADDED 5/-6/-7	СВ	06.10.06
Α	NEW IS	SUE		CP	03.04.03
REV.			DESCRIPTION	BY	DATE
DESIGN JB			DART AEROSPA	ACE	LTD

DESIGN	JB	DART AEROS!	PACE LTD
DRAWN	RF,	HAWKESBURY, ONTA	ARIO, CANADA
CHECKED	#	DRAWING NO.	REV. F
MFG. APPR.	TIL	D3188	SHEET 1 OF 11
APPROVED	-10	TITLE	SCALE
DE APPR.	1	SPACEPOD BODY	NTS
DATE 09.0	7.13	COPYRIGHT © 2003 BY DAR THIS SOCIAMENT IS PRIVATE AND CONFIDENTIAL AND IS SUP NOT TO BE USED FOR ANY PURPOSE OR COMED OR COM-	MULED ON THE EXPRESS CONDITION THAT IT IS JUNICATED TO ANY OTHER PERSON WITHOUT

5

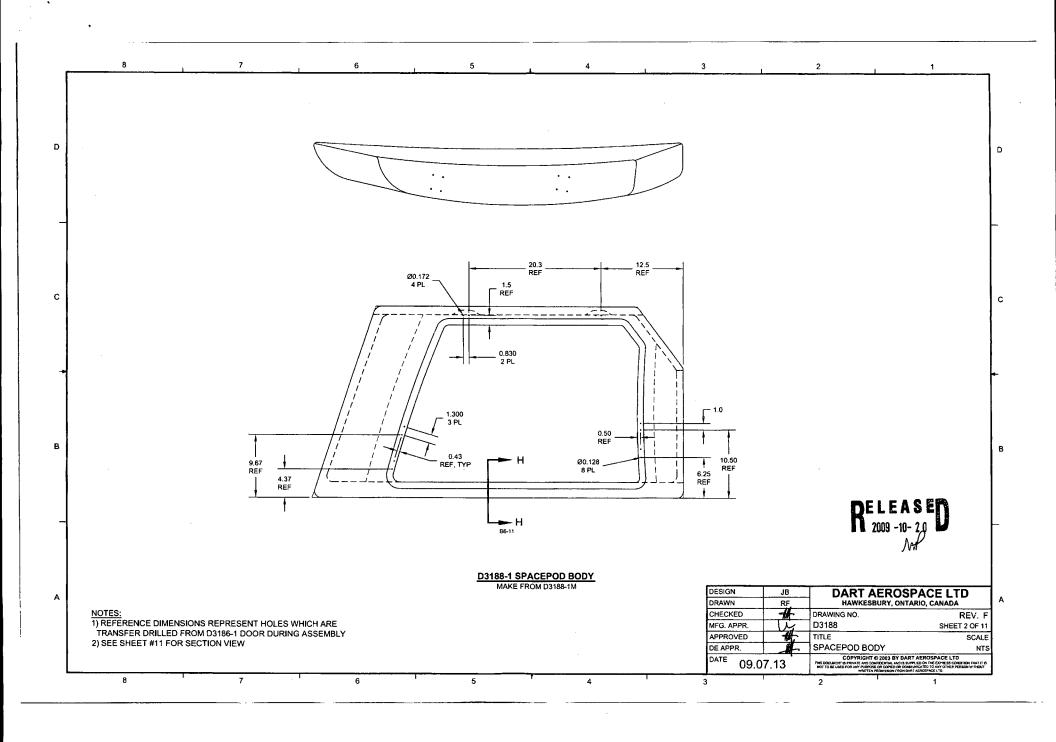
6

20 4 .	D-4		
DQA: _	Date:	•	_

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

									QA Closed:	Date	:			
Work Order	·:				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS				
Part No	o				Rework Scrap Use-as-is Work Order Update	The	Skid-tube Machining rmoforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other			
Root				Descr	ption of work order update	Initial	Ac	ction	Sign &	***				
Cause	Date	Step	Qty		or Non-conformance	Chief En	g Desc	cription	Date	Verification	QC Inspector			
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training	ooling or all													
Unapproved	_1	1	<u></u>	<u> </u>	F	L AULT CAT	JLT CATEGORY							
Landing	g Gear				General									
	Bending Centre Not Concentric to O/S Cracks			o/s	Bend BOM/Route Broken/Damaged	Grain Hardv Inspe			Ovalized Over/Under Part Incorre		Pressure/Forced Temperature/Cure Weld			
	Crushed/Crimped.				Burrs Contamination Countersink	\blacksquare	ctions Incomplete, tenance beled	/Unclear	Part Lost/Mi Part Moved Positioned V	· _	Wrong Stock Pulled			
	Inspection Strip in Tube Cut Too Shor			Cut Too Short	Misre	aď	:	Power Loss/	_	Other				
-	Ripples in Bend Drill Holes			╡	Offse									
-	Torque Waves in Extrusion Drawing				Drawing		f Calibration f Sequence							
+	Turning Sequence Wave/Twist in Tube				Folio	\vdash	de Dimensions							



NCR:	CR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date:												
											QA Closed:	Date	e:
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part f	٠ . ١٥٠					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-∤	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial			Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup	\Box												
Other													
Process				į									
Supplier													į
Training													
Unapproved			<u> </u>								<u></u>		
						· F	AUI	LT CATE	GORY				
Landi	ng G	Sear				General	_	_		_	_	-	
	-	Bending				Bend	_	Grain			Ovalized]	Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged	\perp	-l `	on Incomplete		Part Incorre	ct	Weld
	Crushed/Crimped.					Burrs		_	ions Incomplete/l	Jnclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs			Contamination		Mainte	nance	ļ	Part Moved				
	Heat Treat				Countersink	\perp	Mislabe			Positioned V		_	
	\vdash	Inspection	•	Tube		Cut Too Short	Misread				Power Loss/	Surge	Other
	Ripples in Bend				Drill Holes		Offset						
	Torque Waves in Extrusion				n	Drawing		Out of (

Out of Sequence

Outside Dimensions

DQA:

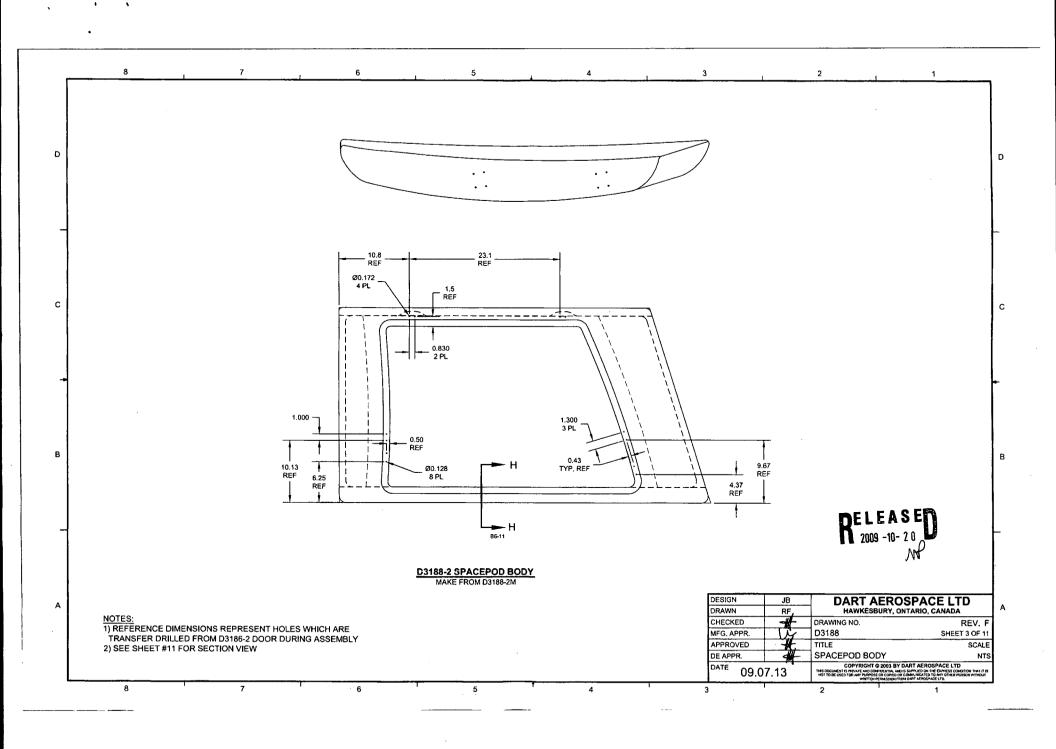
Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



									DQA:	Date:	•
NCR: Yes	/ No				WORK ORDER NON-C	ONFORI	MANCE / UP	DATE	QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No.					Rework Scrap Use-as-is Work Order Update		Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	•	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	. Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup											

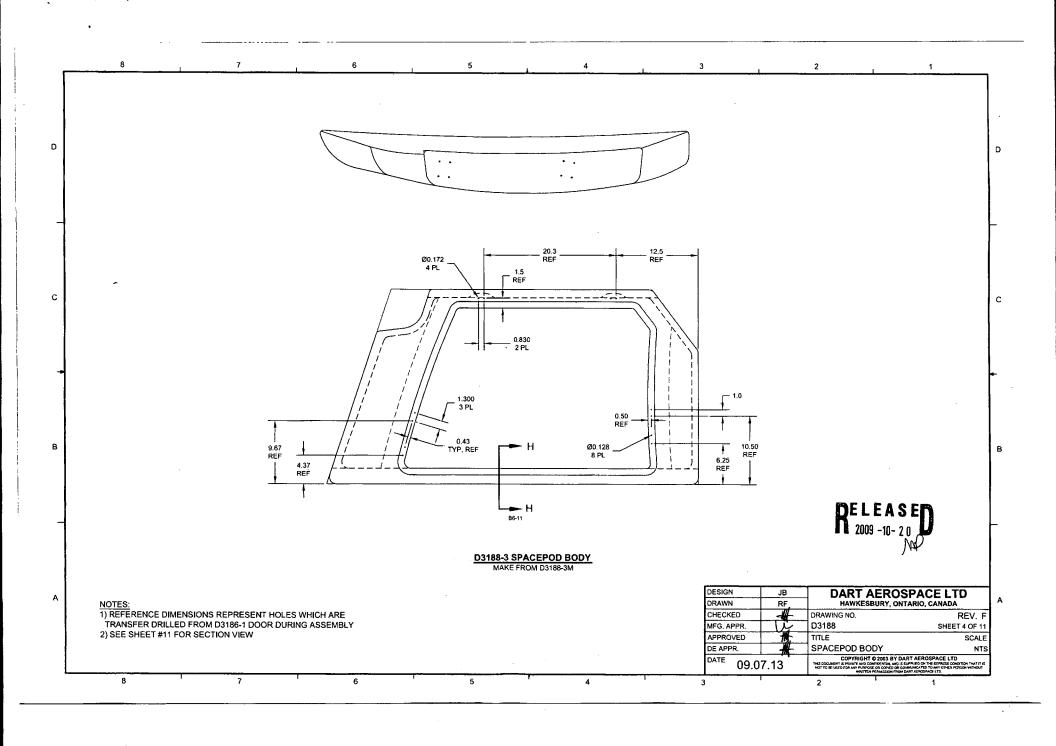
Unapproved				1				
			F	AUL	T CATEGORY			
Landi	ng (Gear	General		_	_		
		Bending	Bend		Grain	Ovalized		Pressure/Forced
		Centre Not Concentric to O/S	BOM/Route		Hardware	Over/Under	tolerance	Temperature/Cure
		Cracks	Broken/Damaged		Inspection Incomplete	Part Incorrec	t	Weld
		Crushed/Crimped.	Burrs		Instructions Incomplete/Unclear	Part Lost/Mis	ssing	Wrong Stock Pulled
		Cuffs	Contamination		Maintenance	Part Moved		
		Heat Treat	Countersink		Mislabeled	Positioned W	/rong	_
		Inspection Strip in Tube	Cut Too Short		Misread	Power Loss/S	Surge	Other
		Ripples in Bend	Drill Holes		Offset			
		Torque Waves in Extrusion	Drawing		Out of Calibration			
		Turning Sequence	Finish		Out of Sequence			

Outside Dimensions

Wave/Twist in Tube

Folio

Other Process Supplier Training



NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORN	NANCE / UP E)ATE			
											QA Closed:	Date	<u>;</u>
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part NCR	No.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining oforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Acti	ion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Cł	nief Eng	Descri	iption	Date	Verification	QC Inspector
Doc/Data						•							
Equip/Tooling	Ш												
Operator													
Material													
Setup								:					
Other													
Process													
Supplier	Ш												
Training							1						
Unapproved													
							AUI	LT CATE	SCIRY				
Landi		3			_	General	_	,				-	
	\vdash	Bending			ļ	Bend	<u> </u>	Grain		_	Ovalized	1	Pressure/Forced
		Centre No	ot Concer	ntric to	D/S	BOM/Route		Hardwa	re		Over/Under	⊢	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped.			Burrs		Instructi	oris Incomplete/U	Inclear	Part Lost/M	issing	Wrong Stock Pulled
	\vdash	Cuffs				Contamination		Mainte			Part Moved		
		Heat Trea				Countersink		Mislabe	led		Positioned \	Vrong	_
		Inspectio	n Strip in	Tube		Cut Too Short		Misread		L	Power Loss/	Surge	Other
	L	Ripples in	Bend			Drill Holes		Offset					
	1	Torque W	aves in E	xtrusio	n	Drawing		Out of C	alibration				

Out of Sequence

Outside Dimensions

DQA:

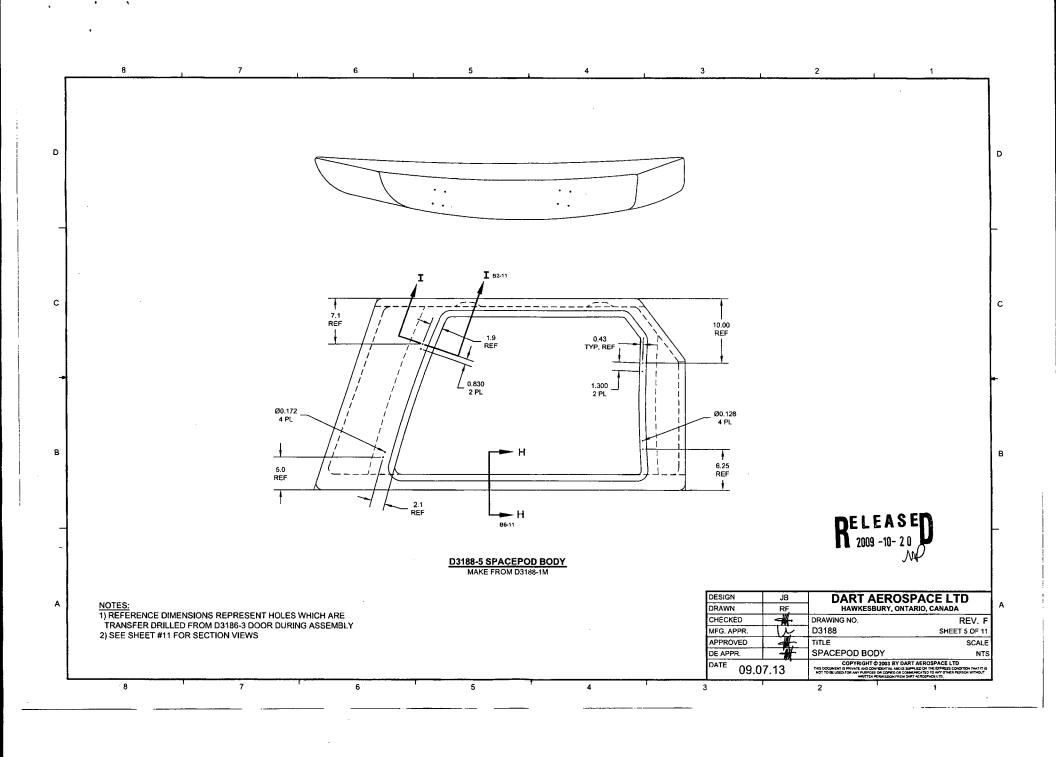
Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



												DQA:	Date	9:	•
NCR:	Yes	/ No	,			WORK ORDER NON-C	100	NFORM	AANCE / UPI	DATE	0	- A Closed:	 Date		
								<u> </u>			Ų/	A Closed.	Date	-	
Work Ord	or.					DISPOSITION				AGAINST DE	EΡA	RTMENT/	PROCESS		
Part	No.					Rework Scrap Use-as-is Work Order Update		f Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite			Water Jet d. Eng. Coor. e/Packaging Supplier		Engineering Quality Other
	,		T	<u></u>				L		· · · · · · · · · · · · · · · · · · ·		·		-	
Root		_		_		ption of work order update	1	Initial		tion	-	Sign &			
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Eng	Desci	ription	_	Date	Verification	4	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
							AUL	T CATE	GORY						
Land	Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat				o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink		Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled				valized ver/Under art Incorrec art Lost/Mi art Moved ositioned W	st ssing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	-	Inspection Ripples in	•	ıupe	-	Cut Too Short Drill Holes	-	Misreac Offset	I		٦ ^٢ ٥	ower Loss/	Surge _		Other
l	1	,pp.c3 11	Denia		1	Dim Holes	1	1 Onset							

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

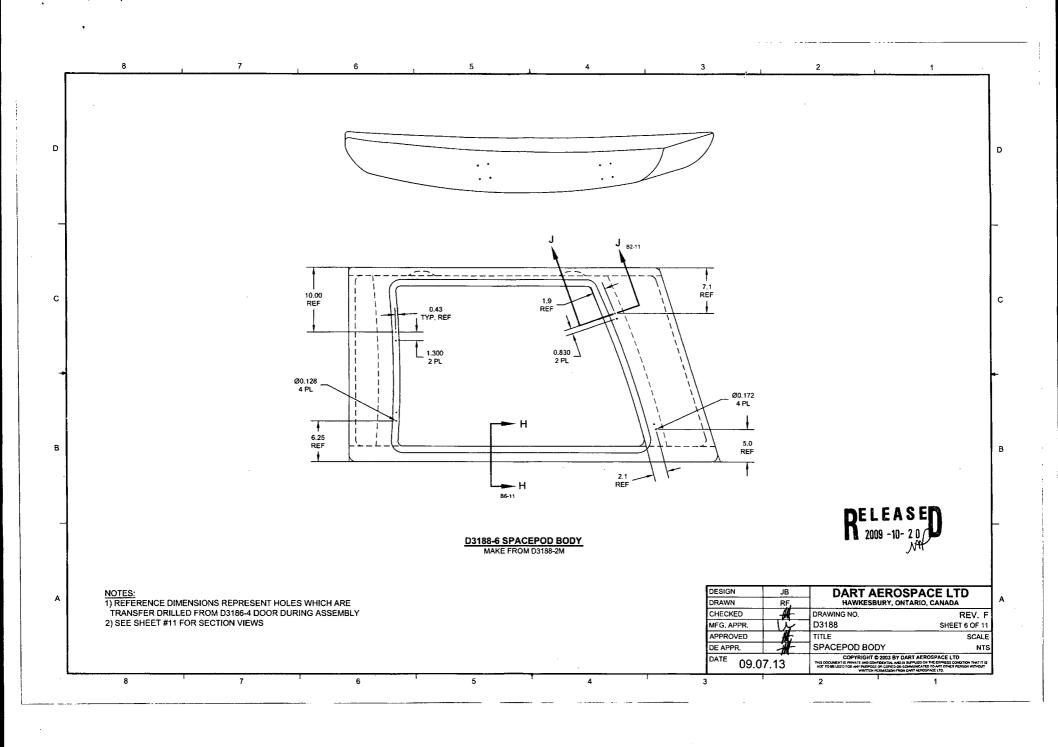
Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

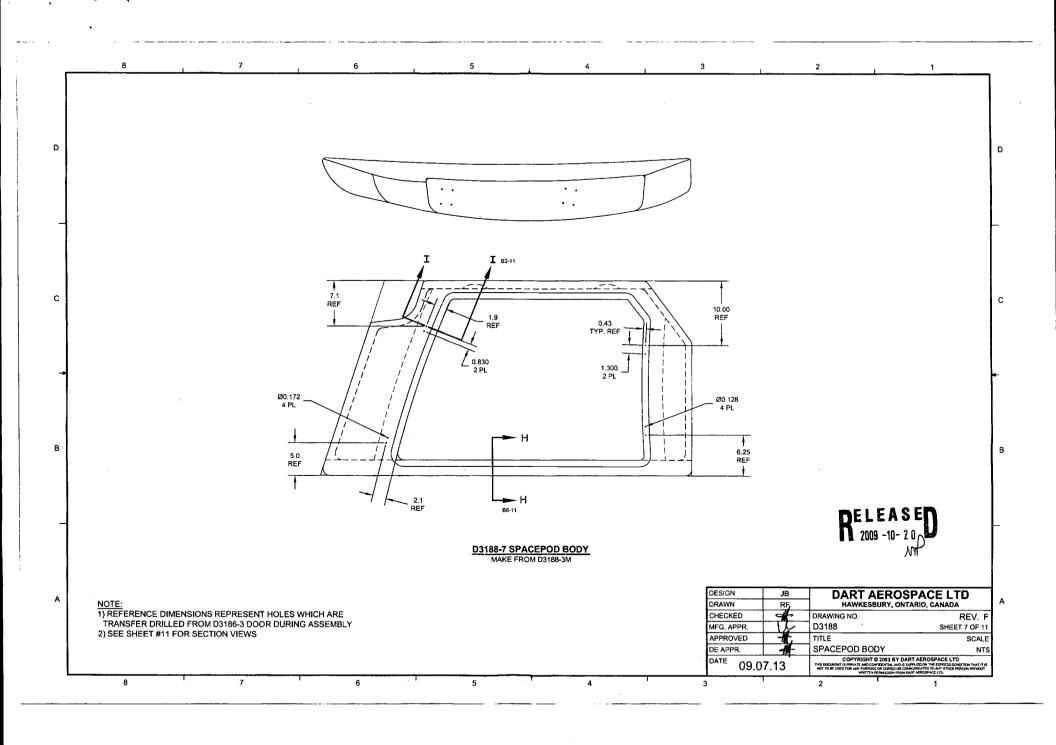


									DQA:	Date:	•
NCR: Yes	s / No				WORK ORDER NON-C	CONFORM	лance / UP		QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	PROCESS	
Part No.	·				Rework Scrap Use-as-is Work Order Update]	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Ac	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data					-						
quip/Tooling		ļ									
Operator											
Material											
Setup		1	1					,			
Other]										
Process	1	1									
Supplier											
Fraining	7										

Landing	Gear	General	_		_
	Bending	Bend	Grain	Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure
	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld
	Crushed/Crimped.	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Contamination	Maintenance	Part Moved	
	Heat Treat	Countersink	Mislabeled	Positioned Wrong	_
	Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge	Other
	Ripples in Bend	Drill Holes	Offset		
	Torque Waves in Extrusion	Drawing	Out of Calibration		
	Turning Sequence	Finish	Out of Sequence		
	Wave/Twist in Tube	Folio	Outside Dimensions		

FAULT CATEGORY

Unapproved



											DQA:	Date	•
NCR:	Yes	/ No	1			WORK ORDER NON-C		VFORM	MANCE / UPI	DATE	04.01	D-4-	
· · · · · · · · · · · · · · · · · · ·											QA Closed:	Date	
Work Ord	er.					DISPOSITION				AGAINST DE	PARTME N T,	PROCESS	
Part I	No.		***			Rework Scrap Use-as-is Work Order Update		f Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
	,					Trom Grace Space	,		20.80 . 00		J		ا ا
Root		_				ption of work order update	1	nitial	Act		Sign &		
Cause	.	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													·
						F	AUL	T CATE	GORY				
Landi	ng G	ear				General		_			_		
Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend				D/S	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		1	on Incomplete ions Incomplete/U nance iled	Jnclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
	\vdash	Torque W		extrusion	,	Drawing		4	Calibration				

Out of Sequence

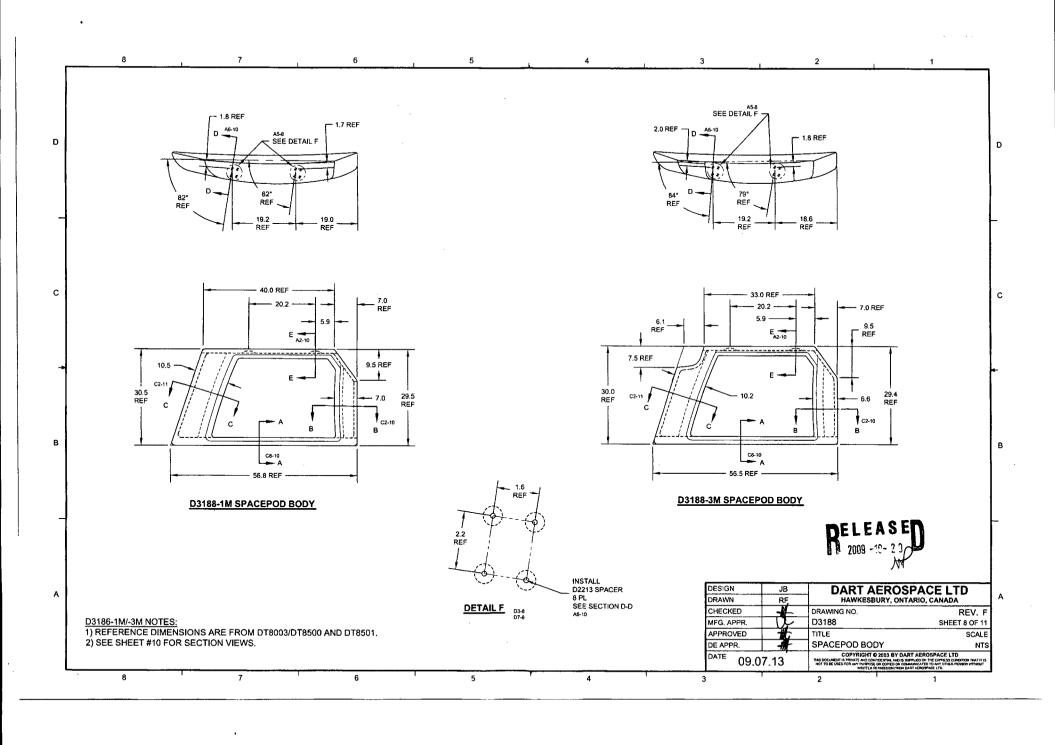
Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish Folio



											DQA:	Date:	•
NCR:	Yes	/ No				WORK ORDER NON-	COI	VFORM	MANCE / UP	DATE			
						•					QA Closed:	Date:	
Work Ord	or:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Ord	٠					Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part	No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•	<u> </u>				Use-as-is]		noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR	No.					Work Order Update]		Large Fab	Composite]	Supplier	
D4				1	Doscri	ption of work order update		nitial	٨٥	ction	Sign &	[
Root Cause		Date	Step	Qty		or Non-conformance	ļ	nief Eng		cription	Date	Verification	QC Inspector
Doc/Data	т	Date	эсер	Qty		or wor-comormance	1	ner Ling	Desc	ription	Date	Vermeation	QC MSpector
Equip/Tooling	\vdash		į										
Operator	H						1						
Material	\Box		l										
Setup	Н												
Other													
Process												ļ	
Supplier													
Training			1										-
Unapproved			<u> </u>				_						
							AUL	T CATE	GORY				
Land		1				General	_	1			7	_	٦ .
	<u></u>	Bending	_			Bend	\vdash	Grain		<u> </u>	Ovalized	<u> </u>	Pressure/Forced
	_	Centre N	ot Concei	ntric to	o/s	BOM/Route	\vdash	Hardwa		<u> </u>	Over/Under		Temperature/Cure
	\vdash	Cracks	,		<u> </u>	Broken/Damaged	\vdash	i '	on Incomplete	,, <u> </u>	Part Incorre		Weld
1	1	Crushed/	'Crimped.		1	Burrs	1	Instruct	ions Incomplete/	/Unclear	Part Lost/M	issing	Wrong Stock Pulled

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Part Moved

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

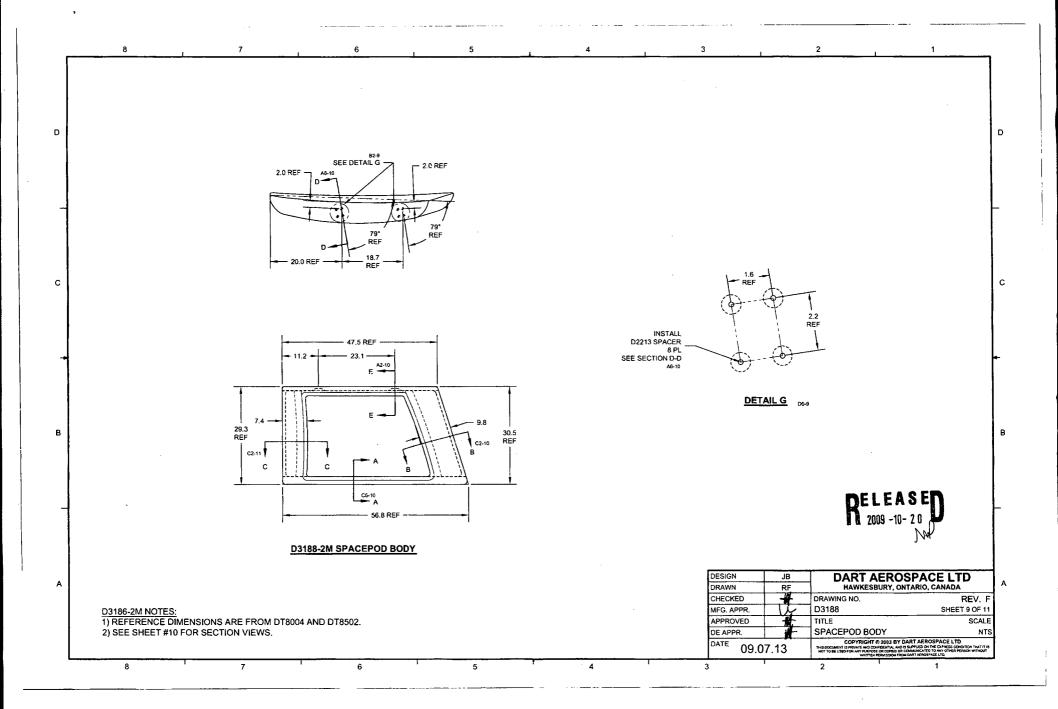
Wave/Twist in Tube

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion



											DQA	:Dat	e: _	
NCR:	Yes	/ No	,			WORK ORDER NON-	COI	NFORN	AANCE / UP	DATE	QA Closed	: Dat	۰.	
	<u> </u>					DISPOSITION				AGAINST DE	• • • • • • • • • • • • • • • • • • • •			
Work Ord	er: ˌ						٦		 1		7			
Part I	No.					Rework Scrap Use-as-is		r	Skid-tube Machining noforming	Crosstube Small Fab Finishing	⊣	Water Jet od. Eng. Coor. ore/Packaging	_	Engineering Quality Other
NCR I	No.					Work Order Update]	ł	Large Fab	Composite]	Supplier		
Root					Descri	ption of work order update		Initial	Ac	tion	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	1	QC Inspector
Doc/Data														
Equip/Tooling	Ш													
Operator			}				İ							
Material														
Setup														
Other														
Process														
Supplier	Ш													
Training														
Unapproved			<u> </u>	<u> </u>		· ·								
							AUI	LT CATE	GORY					
Landi	ng (1				General		1		[-	г		
		Bending				Bend	-	Grain		<u> </u>	Ovalized			Pressure/Forced
	Centre Not Concentric to O/S BOM/Route					-∤ '	<u> </u>	Hardwa		<u> </u>	Over/Unde	· ·		Temperature/Cure
	H					Broken/Damaged	<u> </u>	4	on Incomplete	<u> </u>	Part Incorr	.	-	Weld
	Crushed/Crimped. Burrs					4				Part Lost/N			Wrong Stock Pulled	
	Contamination					- i				Part Move				
	Heat Treat Countersink					Countersink					Positioned			1
1	l	Inspectio	n Strip in	Tube		Cut Too Short	ļ	Misread	ł		Power Loss	s/Surge		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

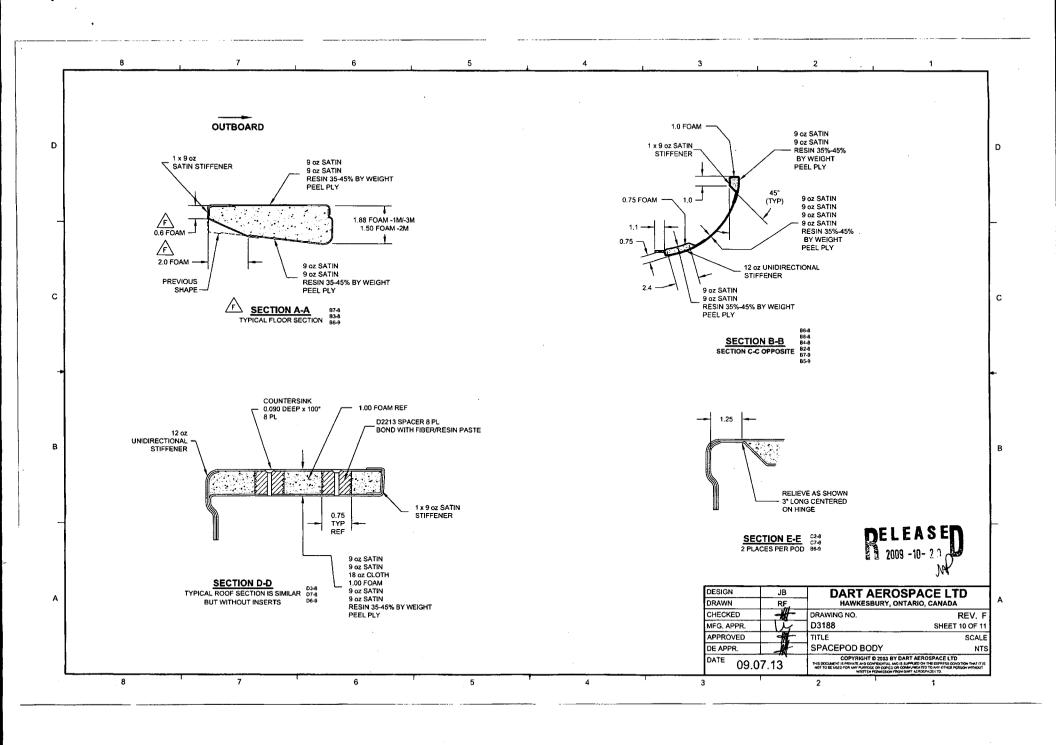
Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



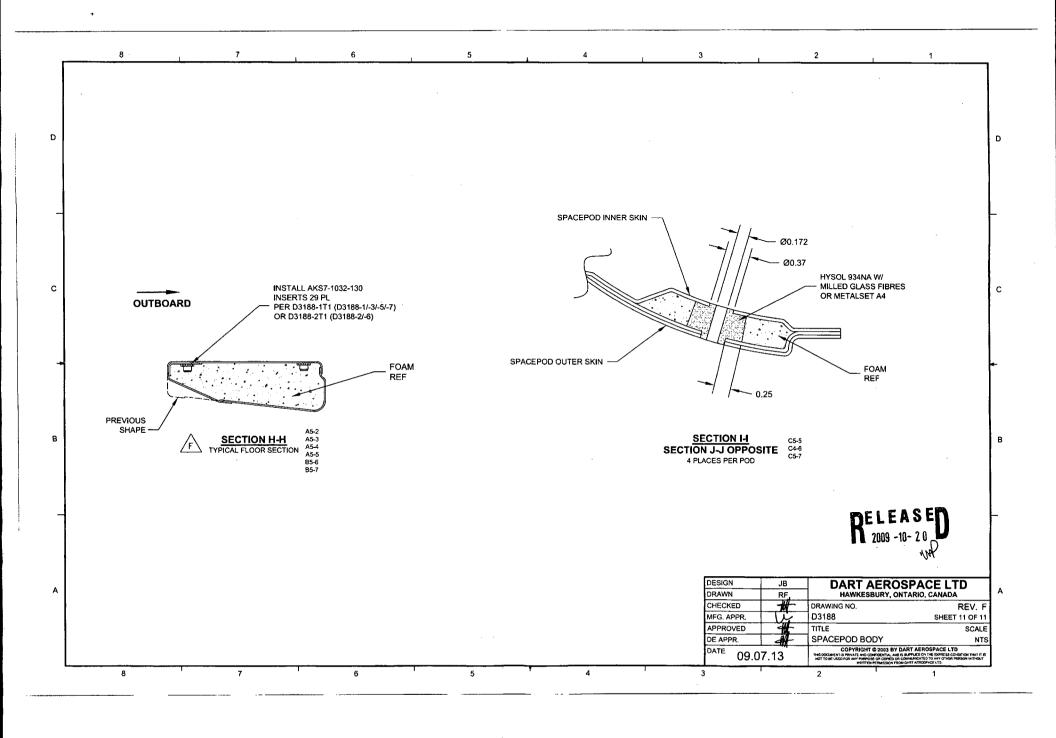
							DQA:	Date:	
NCR: Yes	/ No			WORK ORDER NON-	CONFORM	MANCE / UPDATE	QA Closed:	Date:	
Work Order:				DISPOSITION		AGA	INST DEPARTMENT	/PROCESS	
Part No.				Rework Scrap Use-as-is Work Order Update] '	~ Ы	I Fab Pro shing Rec/Stor	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Description of work order update	Initial	Action	Sign &		
Cause	Date	Step	Qty	or Non-conformance	Chief Eng	Description	Date	Verification	QC Inspector
Doc/Data									
quip/Tooling									
Operator									
/Jaterial									
etup									
Other									,
Process									**
Supplier									
Fraining				•					

Landing (Gear	General	_		_
	Bending	Bend	Grain	Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure
	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld
	Crushed/Crimped.	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Contamination	Maintenance	Part Moved	-
	Heat Treat	Countersink	Mislabeled	Positioned Wrong	
	Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge	Other
	Ripples in Bend	Drill Holes	Offset	•	
	Torque Waves in Extrusion	Drawing	Out of Calibration		
	Turning Sequence	Finish	Out of Sequence		
	Wave/Twist in Tube	Folio	Outside Dimensions		

FAULT CATEGORY

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Unapproved



											DQA	: Dat	te:	à i
NCR:	Yes ,	/ No				WORK ORDER NON-O	100	NFORM	ANCE / UP	DATE				
						***					QA Closed	l: Dat	te:	·
Mark Orde	or:					DISPOSITION				AGAINST DE	PARTMEN	T/PROCESS		
Work Orde	er. 					Rework	1		Skid-tube	Crosstube	7	Water Jet	\neg	Engineering
Part I	No					Scrap Use-as-is		N	Machining noforming	Small Fab Finishing	Pr	od. Eng. Coor. ore/Packaging		Quality
NCR I	No				<u>.</u>	Work Order Update]		Large Fab	Composite] (180/30)	Supplier		
Root					Descri	ption of work order update	П	Initial	Ac.	tion	Sign &			
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	n	QC Inspector
Doc/Data														
Equip/Tooling														
Operator				1 1			1	1					Ì	
Material]			-					1		
Setup]										
Other				1								ļ		
Process]											
Supplier														
Training	\Box						1							
Unapproved									l					
						F	AUI	T CATE	GORY					
Landi	ng Ge	ear				General		_			_			
		Bending	•			Bend		Grain		L	Ovalized		Ш	Pressure/Forced
		Centre No	ot Conce	ntric to C)/S	BOM/Route		Hardwa	re		Over/Und	er tolerance		Temperature/Cure
		Cracks	,			Broken/Damaged		Inspecti	on Incomplete		Part Incor	ect		Weld
		rushed/	Crimped.	-		Burrs		Instructi	ions Incomplete/	'Unclear	Part Lost/I	Missing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Move	d	- <u>-</u>	
		Heat Trea	it			Countersink		Mislabe	led		Positioned	l Wrong		
		nspectio	n Strip in	Tube		Cut Too Short	Г	Misread	I		Power Los	s/Surge		Other
	Ripples in Bend					Drill Holes		Offset		_				

Out of Calibration
Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio



DELASTEK Inc. 2699 5e Avenue Local 14, C.P. 10100 Grand-Mère, Québec G9T 5K7 Canada

Tel.: (819) 533-5788 Fax: (819) 533-3494

PACKING SLIP

CERTIFICATE OF COMPLIANCE

Invoice No.	46495
Customer No.	DART US

Bill To	Ship To	
DART AEROSPACE LTD	 DART AEROSPACE LTD	
	1070 11 1 0	

1270, Aberdeen Street Hawksbury, Ontario K6A 1K7 Canada

Telephone: 613-632-5200 Contact: Linda Lacelle 1270, Aberdeen Street
Hawksbury, Ontario K6A 1K7
Canada

Telephone: 613-632-5200 **Contact**: Linda Lacelle

Accepted by:

Quality department

Ship Date	Order Da	ite Our	Our SO # Ordered b			Your PO#	Terms
21-01-2013	21-01-2013 16-10-2012		21923 Brigitte Golde		den	PO18135	Net 30 days USA
Ship Via			F.O.B.			Salesperson	GST/PST
Day & F		Origin			Mathieu Veilleux, ext. 235		
Order Qty	B.O. Qty	Current Ship.		Item number		Descrip	tion
1	0	1	DKC13	34-0071	Dwg. D31	88 Rév.: F	Body RH B917(U of M: Chaque
					1 /	1701 Sill30	Lot # 45778
1	0	1	DKC13	4-0060		N° D3186-2P Spacepod D 86 Rév.: E	Door RH B9170 U of M: Chaque
	1				Sei	rial #	Lot #
					В9	1705	47607
]							
					:		
			İ				
			1				
			-				
							·
							2
	10 11	11 , 1		1611			- //_

It is hereby certified that all materials, process and finished items were controlled and tested in accordance with the requirements of the purchase order and applicable specifications. All such records are on file at our plant and available for review upon request

☐ Cust. ☐ Adm. ☐ Quality ☑ Ship:

DELASTEK AERONAUTIQUE

Date:

Mardi, 2012-10-23 08:35:10

Utilisateur:

marc dubé

Feuille de Procédé

Client

: DART US DART AEROSPACE

Type

Numéro Job

: 45778 : 3763

Numéro

Numéro B.A. Cette fois

: 2012-10-23

Prsht Rev. : NC

Prem. fois

: 43682 Job précédente

Écrit par Vérifié & Approuvé par

Commentaires

: N° de dessin: D3188-2M rev. F

E.O.: N/A

Feuille de Procédé Rév.: 06 AMB0349 remplacé par

Total:

AMB0511 (réf. RFC #226)

Formulaire d'inspection: N/A

Produit additionnel

1.0

2.0

Comment

Séq.:

Numéro Job:

Machine ou

AAC1616

0.050 UNITE(s)/Unit

N° 83634, Frekote Loctite Wolo

PRÉPARATION

Qtv.:

Comment Setup: 0.00Hrs/ Run: 5.0000Min Total Run: 0.0833Hrs

Faire la préparation du moule selon IF134-0020.

Date 26-10-13 ceau: Nt 4109

3.0

4.0

5.0

Comment

Comment

Comment

AAC1885

Qty.: 9.84 VERGE(s)/Unit

Total:

Tissu à délaminer Release ply B

AAC1887

Qty.: 9.27 VERGE(s)/Unit Total:

Wrightlon 5200 Bleu P3

AC0885

Qty.:

6.00 VERGE(s)/Unit Total:

6.00 VERGE(s)

Nom Dessin : SPACEPOD BODY RH

Numéro Article : DKC134-0071

Numéro Dessin

Projet Numéro Révision dessin

Matériel

Date Dûe

: DK-362

: Fibre 7781 et résine 411-350

: 2012-10-30

Qté:

1 Ud

UNITE

B 91701

Description:

N° 83634, Frekote Loctite Wolo

0.050 UNITE(s)

Préparation du moule

Wrightlon 5200 Bleu P3

9.84 VERGE(s)

9.27 VERGE(s) # de Lot:

Tissu à délaminer Release ply B

Feutre de drainage N° Airweave N 10

Date: 1 Utilisateur: Numéro Job: # Séq.:

Mardi, 2012-10-23 08:35:10 marc dubé

Feuille de Procédé

SPACEPOD BODY RH Nom Dessin:

DART US DART AEROSPACE

45778

Numéro DKC134-0071

Numéro Job:

Client:



7.00 VERGE(s)/Unit

Machine ou Opération:

Description:

6.0

AC0943

Stretchlon 200 poche à vide Vert

Comment

Qty.:

Total:

7.00 VERGE(s)

7.0

AMB0214

9.7 oz Weave "S" glass #FG-778150-125Y Volan Finish

Comment

Qty.:

11.4 VERGE(s)/Unit Total:

11.4 VERGE(s) 9.7 oz Weave "S" glass #FG-778150-125Y Volan Finish

8.0

N° TG-13-U. Fiberglass 13 oz

Comment

Qty.: N° TG-13-U, Fiberglass 13 oz

Total: 0.80 VERGE(s)/Unit

0.80 VERGE(s) 1 - 36 30 2 - 1

9.0 AMB0213 WR1850 Roving 18oz. x 50'

Comment

Qty.:

0.350 KILOGRAMME(s)/Unit Total:

9.350 KILOGRAMME N° de Lot:

10.0 AC0886 Ruban à gommer jaune #: T/AT-200Y

Comment Qtv.:

4.0000 ROULEAU(s)/Unit

4.0000 ROULEAU(s) Total:

11.0

PREP-GENERAL

Préparation du matériel





Tailler les tissus selon IF134-0020.

WR1850 Roving 18oz. x 50"

Date 24-67 Sceau:

Setup: 0.00Hrs/ Run: 45.0000Min Total Run: 0.7500Hrs

Catalyst N° DDM-9

12.0

Qty.: 0.0640 GALLON(s)/Unit Total:

Catalyst N° DDM-9

N° de Lot:

Q.0640, GALLON(s)

Fibre de verre Miapoxy 66

AMB0212 13.0

Comment

Résine (411B7530) 411-350 promo, 75min.

Comment

Qty.:

2.000 LITRE(s)/Unit Total: 2.000 LITRE(s)

Résine (411B7530) 411-350 promo. 75min.

14.0

AAC1540

Comment

Qty.:

0.0040 GALLON(s)/Unit Total: Fibre de verre Miapoxy 66

N° de Lot:

0.0040 GALLON(s)

15.0

PREP-GENERAL

Préparation du matériel





Comment

Setup: 0.00Hrs/ Run: 5.0000Min Total Run: 0.0833Hrs

Laminer la 1ère coquille selon IF134-0020.



S.V 4299

Date: Mardi. 2012-10-23 08:35:10 **Utilisateur:** marc dubé Feuille de Procédé SPACEPOD BODY RH Client: DART US DART AEROSPACE DKC134-0071 45778 Numéro Numéro Job: Numéro Job: # Séq.: Description: Machine ou Opération: 16.0 AMB0355 ATC core-cell A500 plain 4'x8' 1" thick Comment 0.750 FEUILLE(s)/Unit 0.750 FEUILLE(s) Qty.: Total: N° de Lot: 1-26978 - 2 ATC core-cell A500 plain 4'x8' 1" thick Faire le taillage du matériel 17.0 TAILLAGE Setup: 0.00Hrs/ Run: 120.0000Min Total Run: 2.0000Hrs Tailler et ajuster les Foam Core selon IF134-0020. 13 Sceau: Résine (411B7530) 411-350 promo. 75min. 18.0 0.136 KILOGRAMME(s) Qty.: 0.136 KILOGRAMME(s)/Unit Total: N° de Lot: 1-38897-Résine (411B7530) 411-350 promo. 75min. Catalyst N° DDM-9 AMB0286 19.0 Comment 0.0096 GALLON(s)/Unit 0.0096 GALLON(s) Qtv.: N° de Lot: 1-27829 -Catalyst N° DDM-9 20.0 FINITION Comment Sceller les foam core selon IF134-00 21.0 Comment Setup: 0.00Hrs/ Run: 0.0000Min Total Run: 0.0000Hrs Percer les foam core selon IF134 Polybond B46F 22.0 Comment Qty.: 0.078 KIT(s)/Unit Total: 0.078 KIT(s) N° de Lot: Polybond B46F 23.0

Setup: 0.00Hrs/ Run: 60.0000Min Total Run: 1.0000Hrs

Installer les foam core selon IF134-0020.

Date: Mardi, 2012-10-23 08:35:10 **Utilisateur:** marc dubé Feuille de Procédé SPACEPOD BODY RH Client: DART US DART AEROSPACE Nom Dessin: DKC134-0071 Numéro Numéro Job: Numéro Job: # Séq.: Machine ou Opération: **Description:** Date: Sceau: N° P-15-3, Adtech Micro Ultra Filler 24.0 AAC1492 Comment Qty.: 0.050 GALLON(s)/Unit Total: 0.050 GALLON(s) # de Lot: 1-39010 - 1 N° P-15-3, Adtech Micro Ultra Filler Finition Générale 25.0 Setup: 0.00Hrs/ Run: 30.0000Min Total Run: 0.5000Hrs Usiner les foam core selon IF134-0020. **61/13** Sceau: Résine (411B7530) 411-350 promo. 75min. AMB0212 26.0 Comment 1.600 KILOGRAMME(s)/Unit Total: 1.600 KILOGRAMME(s) Qty.: N° de Lot: 1-39130-4 Résine (411B7530) 411-350 promo. 75min. 27.0 AMB0286 Catalyst N° DDM-9 0.0536 GALLON(s)/Unit Total: Comment 0.0536 GALLON(s) Qty.: N° de Lot: 1-27829 -1 Catalyst N° DDM-9 28.0 Comment Setup: 0.00Hrs/ Run: 90.0000Min Total Run: 1.5000Hrs Laminer les plis de 9oz selon IF134-0020 29.0 Comment Faire le taillage selon IF134-0022 13 Sceau: 30.0 AMB0286 Catalyst N° DDM-9

0.0144 GALLON(s)

Fibre de verre Miapoxy 66

0.0420 GALLON(s)

N° de Lot: 1-37956-1

N° de Lot: 1-27829 -1

Comment

Comment

31.0

Qty.:

AAC1540

Catalyst N° DDM-9

Fibre de verre Miapoxy 66

0.0144 GALLON(s)/Unit Total:

0.0420 GALLON(s)/Unit Total:

Date: Mardi, 2012-10-23 08:35:10 **Utilisateur:** marc dubé Feuille de Procédé SPACEPOD BODY RH Client: DART US DART AEROSPACE DKC134-0071 45778 Numéro Numéro Job: Numéro Job: # Séq.: **Description:** Machine ou Opération: Résine (411B7530) 411-350 promo. 75min. 32.0 AMB0212 Comment 0.450 KILOGRAMME(s) Qty.: 0.450 KILOGRAMME(s)/Unit Total: N° de Lot: 1-39130 Résine (411B7530) 411-350 promo. 75min. 33.0 LAMINAGE Faire le laminage Setup: 0.00Hrs/ Run: 55.0000Min Total Run: 0.9167Hrs Comment Faire le laminage des derniers plis 9oz selon IF134-0020. Date: 10/61/13 Sceau: pacer N° D2213 34.0 Comment Qty.: Total: 1 UNITE(s)/Unit Spacer N° D2213 N° de Lot: 35.0 Comment Setup: 0.00Hrs/ Run: 45.0000Min Total Run: 0.7500Hrs Faire l'assemblage des inserts selon IG 0097. 36.0 Dupont Primer N° 7704S 0.5000 UNITE(s)/Unit Total: 0.5000 UNITE(s) Comment Qty.: N° de Lot: 1-35337-1 Dupont Primer N° 7704S 37.0 AAC1101 N° 7775S, Dupont Activator - Reducer Chromabase Comment Qty.: 0.0283 UNITE(s)/Unit Total: 0.0283 UNITE(s) N° de Lot: 1-36256-3 N° 7775S, Dupont Activator - Reducer Chromabase 38.0 Finition Générale Setup: 0.00Hrs/ Run: 0.0000Min Total Run: 0.0000Hrs Comment Préparer la pièce selon IG 0008. 39.0 Application primer Setup: 0.00Hrs/ Run: 0.0000Min Total Run: 0.0000Hrs Préparer et appliquer le primer selon IG 0008.

de fiche de mélange:

Date: 160013sceau:

Date: Mardi, 2012-10-23 08:35:10 **Utilisateur:** marc dubé Feuille de Procédé Client: DART US DART AEROSPACE SPACEPOD BODY RH Nom Dessin: 45778 DKC134-0071 Numéro Job: Numéro Numéro Job: # Séq.: Machine ou Opération: Description: 40.0 AAC1492 N° P-15-3, Adtech Micro Ultra Filler Comment Qty.: 0.010 GALLON(s)/Unit Total: 0.010 GALLON(s) N° P-15-3, Adtech Micro Ultra Filler # de Lot: 1-39010. 41.0 Comment Setup: 0.00Hrs/ Run: 90.0000Min Total Run: 1.5000Hrs Faire les réparations de finition s'il y a lieu selon IG 0008. Date: 17/01/13 Sceau: 42.0 Dupont Primer N° 7704S Comment Qty.: 0.5000 UNITE(s)/Unit Total: 0.5000 UNITE(s) N° de Lot: 1-36423 - 1 Dupont Primer N° 7704S N° 7775S, Dupont Activator - Reducer Chromabase AAC1101 43.0 Comment Qty.: 0.0283 UNITE(s)/Unit Total: 0.0283 UNITE(s) N° de Lot: 1-36256 - 2 N° 7775S, Dupont Activator - Reducer Chromabase 44.0 Application primer Comment Setup: 0.00Hrs/ Run: 0.0000Min Total Run: 0.0000Hrs Préparer et appliquer le primer selon IG 0008. # de fiche de mélange: I 45.0 Comment Setup: 0.00Hrs/ Run: 15.0000Min Total Run: 0.2500Hrs Faire l'inspection générale de la pièce selon le dessin par le département de la qualité. Date: 18 jan 13 Sceau:

Setup: 0.00Hrs/ Run: 0.0000Min Total Run: 0.0000Hrs

Sceau:

Faire l'emballage selon IG 0057.

46.0